



## CHAPTER 3

---

### Binding

Bringing it all together

**G**PO's book binding division, one of the largest and most varied of its kind in the world, is an essential adjunct to the printing operation. Without some means of preserving the correct order of pages, printing loses a primary element of its importance — the ability to transmit complex ideas in a fixed, repeatable form. GPO's Bindery has brought together many millions of printed sheets into useful, and often beautiful, units.

A large percentage of GPO's original 350 employees were Bindery workers, and throughout its history, GPO's bindery has produced a wider variety of products, from folded, single leaf pamphlets to elaborate leather-bound volumes, than any other commercial binding concern. Virtually every type and style of binding in common use has been

produced by GPO binders, ranging from work done entirely by hand by skilled craftspeople to highly mechanized processes producing thousands of identical pieces.

Besides producing a multitude of books, pamphlets, folders, binders, and tablets, the Bindery also produces decorative marbled paper for its own use, performs a wide variety of cutting and trimming of paper, and prepares and packs finished products for shipment.

From high quality cloth-covered hardbound books to fine leatherbound volumes, from single section pamphlets to spiral-bound training manuals, and from sewn bindings with paper covers to ruled paper and record books, the Bindery is one of GPO's most distinctive and multi-talented divisions.



In a very early photo, circa 1905, women in the Bindery are folding and collating sections or signatures in preparation for sewing, forwarding, and finishing. Women were a significant proportion of the Bindery workforce from GPO's earliest days.





Bookbinders at work finishing cloth- or leather-bound books, circa 1905. Finishing involves stamping titles, other lettering, or decorative work on spines and covers.



Bookbinders casing-in and finishing hardbound books, circa 1910.





Although a great deal of sewing in the Bindery was done by machine by the early 20th century, much of it was still sewn by hand as well. In this photo circa 1930, bindery women (which was a job title) in the foreground work at hand sewing frames, joining signatures (gatherings of pages) together with linen thread. Workers further back appear to be folding and collating pages.



In this photo from the 1930s, bookbinders in the Library Binding Section are taking sewn blocks of pages through the series of steps known as forwarding, in which the block is secured between cloth or leather covers and made ready to be stamped with titles and decorative rules or devices. The number of skilled workers here is impressive — there are 50 or more visible in this one section of the Bindery alone.





Daniel McConnel Smyth invented a machine for sewing book blocks for high-quality bindings in 1879. GPO adopted the machines almost immediately and ran an extremely large battery, as seen in this photo from the 1930s. Smyth sewing is still used today.





Bookbinding grew steadily more automated in the 20th century. In this photo from the 1930s, machines are used for making cloth-bound cases which are then secured to rounded and backed book blocks (shown here stacked in the foreground).



Machines that fabricate a cloth-covered board case came into wide use around the turn of the 20th century. Here four bookbinders operate casemaking machines in the 1940s.





Bookbinders rounding and backing sewn bookblocks during the 1930s with machines that shaped the spine and applied adhesive for backing material.



Bookbinders use stamping tools to apply gold lettering and decoration to spines and covers, the step known as finishing, in this photo from the 1930s.



A machine that applies the lettering and decoration to made-up cases, circa 1930. The covers may be for *United States Statutes at Large*.





The Bindery has been home to many interesting machines. These women are “indexing” in this photo circa 1910, which in binding terms means cutting the notches known as thumb indexes into the book’s fore edge.



Books being taken off a perfect binder, a production line that produced a paperback book with a glued spine. Perfect bindings were invented in the 1920s and GPO was producing many thousands of the inexpensive books and pamphlets per year by the time of this photo in the 1940s.





In this photo from the 1930s, newly cased-in books are packed between brass-edged boards in a hydraulic press that assures that the book will remain unwarped.





A bookbinder operates a machine for cutting rounded corners in this photo from the 1940s. The machine at left is a drill for pages to be inserted in ring binders.



Among the many types of bindings GPO produced was a single section of folded sheets, secured into a pamphlet with a wire “stitch” (similar to a staple). Here, workers are shown on a pamphlet binding line in the 1930s.





GPO's binders produced every kind of folded, stitched, sewn, or glued pamphlet and book. This production line made so-called "perfect bound" books and pamphlets, inexpensive bindings with a glued spine introduced to GPO around the time of this photo in the early 1930s.



Single section pamphlets, being carried along the rail, receive a wire stitch to secure them. This photo from the 1930s is one of many showing employees of different races working side by side. In this period areas in GPO outside the production floor were, like most Federal agencies, segregated.





Bookbinders during the 1940s securing prepared text blocks in cloth-covered cases, or "casing-in."



Workers in the Bindery collated, folded, and sorted all manner of products. Here, training poster sets are collated during World War II.



Printed sheets and blank paper often had to be cut to size. These enormous hydraulic cutting machines sliced through thick stacks of paper as though it were bread in this photo from the 1930s.





Machines for folding large quantities of paper were invented in the mid-19th century. Here, folding machines are being operated in the 1930s.





These large machines fold large sheets of paper down to size during the 1920s. Machine folding was another of the 19th century technologies that greatly expanded GPO's production capacity.



In an era before typewriters or computers, a significant amount of Government record-keeping used bound ledger books and other types of ruled pages. Ruling, done by these machines, circa 1910, was the application of lines using water-based inks. These machines are pen-ruling machines: sheets of paper were fed onto a moving blanket, each held in place by the cords visible in the photo. Pen nibs fed by ink reservoirs were positioned above the paper. After passing under the pens, the paper was carried onto another blanket underneath the machine to dry, before being delivered to a pile at the end. Ruled pads and record books, as well as writing paper, were significant GPO products well into the 20th century.





Ruling machines applied pale blue and red lines to sheets of paper for use in lined tablets and record books in this photo from the 1920s.





A large bank of ruling machines, circa 1920.





A GPO bookbinder in this photo from the 1960s, demonstrates edge marbling, where a decorative pattern is applied to the edges of a bound book by touching it to colored pigments suspended in a gelatinous medium. GPO has produced its own marbling since World War I, and continues the craft today.



The Bindery was responsible for packing finished products for delivery. In this photo from the 1930s, bindery workers bundle and wrap publications in kraft paper.





Folded and wrapped publications (perhaps the *Congressional Record* as shown here), were packed into canvas mail bags, which were then carried on a conveyor system through tunnels under North Capitol Street to the main Post Office at the corner of Massachusetts Avenue for mail delivery. Photo circa 1930.



Over the years, GPO operated branch printing facilities in several Government agencies around Washington. One of the largest was at the Library of Congress, which had not only a print shop that produced the Library's millions of 3" x 5" catalog cards, but a comprehensive bindery which handled periodical binding, repair, and conservation of the Library's collections. Photo circa 1930.